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(54) **Intravenous solutions for influencing renal function and for maintenance therapy.**

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pH 7,43, PCO₂ 42 mmHg, HCO₃⁻ 28 mmol/l, BA + 3,9.

Summary:

5 High daily urine volumes. Progression without complications. Observation period 2 days. Metabolites concentration, electrolytes and blood gases essentially normal.

Diagnosis: Stenosis of Urethra, Prostata-Carcinoma, Diab. mellitus

Operation: Pelvine Lymphadenectomy

Progression: Diuresis: 1st day: 2880 ml
10 2nd day: 2200 ml
3rd day: 4030 ml

Infusion program:

15 1st day: 2000 ml Bicarbonate-electrolyte solution, + 20 mg Lasix + 40 mval KCl
1000 ml Glucose 5 %
2nd day: 2000 ml Bicarbonate-electrolyte solution, 40 mval KCl, 20 mg Lasix
1000 ml Glucose 5 %
3rd day: 2000 ml Bicarbonate-electrolyte solution, + 40 mval KCl, 20 mg Lasix
20 4th day: 1000 ml Bicarbonate-electrolyte solution, + 40 mval KCl, 20 mg Lasix

Balance:

1st day: - 470 ml
25 2nd day: + 1490 ml
3rd day: - 530 ml

Serum values:

30 1st day: Urea-N. 21 mg/dl (norm 7-18), Uric acid 8,9 mg/dl (-7)
other values normal
2nd day: mild higher value of Urea N. and Uric acid
Protein 4,9 g/dl (6-8), Ca 7,8 mg/dl (8,7-10,5)
pH 7,41, PCO₂ 49 mmHg, HCO₃⁻ 31 mmol/l, BA + 5,4
35 3rd day: Chloride 96 mmol/l (97-108), Ca. 7,8 mg/dl, Protein 4,9 g/dl
other values normal
pH 7,49, PCO₂ 48 mmHg, HCO₃⁻ 37, BA + 12,5
4th day: Uric acid. 8,9 mg/dl, Potassium 3,4 mmol/l, Ca 8 mg/dl
40 Phosphor 2,3 mg/dl (2,5-4,5), Protein 4,9 g/dl
other values normal

Summary:

45 High daily urine volumes. Stabilized metabolites, electrolytes-values, Protein mildly lower. Transferred to General clinic on 4th postoperative day = end of observation. Uncomplicated progression.

The components of the solutions may be provided in combined or separated form. Of course, the solutions of the invention may comprise additional substances, such as pharmaceuticals, trace elements, soluble and stable Ca and/or Mg compounds. For example Ca and/or Mg compounds or components may be provided in a container, such as a flexible bag, separate from the bicarbonate component.

Claims

55 1. Use of an aqueous solution comprising at least the following electrolytes at the concentration indicated below:

mval/l.

Na^+	130 to 150
K^+	0 to 6
Cl^-	80 to 125
HCO_3^-	25 to 70

in the preparation of an intravenous medication solution in the treatment of patients suffering from renal dysfunction or renal failure to increase urine volume and stabilize acid-base balance.

2. The use of an aqueous solution according to claim 1, in which the electrolytes are at the concentrations indicated below:

mval/l.

Na^+	135 to 146
K^+	2 to 5
Cl^-	90 to 110
HCO_3^-	40 to 60

3. The use of an aqueous solution according to claim 2, in which the electrolytes are at the concentrations indicated below:

mval/l.

Na^+	146
K^+	4
Cl^-	90
HCO_3^-	60

4. The use of an aqueous solution according to any one of claims 1 to 3, wherein the treatment is followed by a maintenance therapy using an aqueous solution comprising HCO_3^- in the range of 25 to < 40 mval/l.
5. The use of an aqueous solution according to any one of claims 1 to 4, in which the aqueous solutions are provided in conjunction with a solution of a Ca and/or Mg compound.
6. The use of an aqueous solution according to claim 5, in which the solution of the Ca and/or Mg compound is provided in a container, such as a flexible bag, which is separate from the HCO_3^- electrolyte.
7. The use of an aqueous solution according to any one of the claims 1 to 6, in which the therapy involves administration of diuretics to increase diuresis.
8. The use of an aqueous solution according to claim 7, in which the therapy involves administration of loop diuretics to increase diuresis.